WD Caviar® Green™

Desktop Hard Drives

As hard drive capacities increase, the power required to run those drives increases as well. WD Caviar Green drives make it possible for energy-conscious customers to build systems with higher capacities and the right balance of system performance, ensured reliability, and energy conservation.

INTERFACE
SATA

WIDTH/HEIGHT
3.5-inch/1-inch

ROTATIONAL SPEED
IntelliPower™

CAPACITIES
320 GB to 3 TB

MODEL NUMBERS

WD30EZRSDTL	WD15EADS	WD7500AADS
WD25EZRSDTL	WD10EARS	WD6400AARS
WD20EARS	WD10EADS	WD6400AADS
WD20EADS	WD8000AARS	WD5000AADS
WD15EARS	WD7500AARS	WD3200AACS

Note: Not all products may be available in all regions of the world.

Product Features

Massive capacity
WD Caviar Green SATA drives now deliver up to 3 TB of storage on a single drive.

Reduced power consumption
WD has reduced power consumption making it possible for our energy-conscious customers to build systems with higher capacities and the right balance of system performance, ensured reliability, and energy conservation.

Cool and quiet
Drives with WD GreenPower Technology™ yield lower operating temperatures for increased reliability and low acoustics for ultra-quiet PCs and external drives.

Perfect for external drives
External drive manufacturers can eliminate the need for a fan in a high-capacity product with a WD CaviarGreen drive, the coolest and quietest in its class.

IntelliPower
A fine-tuned balance of spin speed, transfer rate, and caching algorithms designed to deliver both significant power savings and solid performance. Additionally, WD Caviar Green drives consume less current during startup allowing lower peak loads on systems as they are booted.

IntelliSeek™
Calculates optimum seek speeds to lower power consumption, noise, and vibration.

NoTouch™ ramp load technology
The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

Advanced Format (AF)
Technology being adopted by WD and other drive manufacturers as one of multiple ways to continue growing hard drive capacities. AF is a more efficient media format that enables increased areal densities. (RS and RSDTL models only)

Applications

- Desktop PCs, high capacity external storage, and NAS.
- Desktop / Consumer RAID Environments - WD Caviar Green Hard Drives are tested and recommended for use in consumer-type RAID applications (i.e., Intel Matrix RAID technology).
  - Business Critical RAID Environments – WD Caviar Green Hard Drives are not recommended for and are not warranted for use in RAID environments utilizing Enterprise HBAs and/or expanders and in multi-bay chassis, as they are not designed for, nor tested in, these specific types of RAID applications. For all Business Critical RAID applications, please consider WD's Enterprise Hard Drives that are specifically designed with RAID-specific, time-limited error recovery (TLER), are tested extensively in 24x7 RAID applications, and include features like enhanced RAFF technology and thermal extended burn-in testing.

WD GreenPower™ TECHNOLOGY

PUT YOUR LIFE ON IT®

WD Caviar Green

Specifications[1]	3 TB	2.5 TB	2 TB	2 TB	1.5 TB	1.5 TB	1 TB
Model number	WD30EZRSDTL	WD25EZRSDTL	WD20EARS	WD20EADS	WD15EARS	WD15EADS	WD10EADS
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity	3,000,592 MB	2,500,495 MB	2,000,398 MB	2,000,398 MB	1,500,301 MB	1,500,301 MB	1,000,204 MB
User sectors per drive	5,860,533,168	4,883,781,168	3,907,029,168	3,907,029,168	2,930,277,168	2,930,277,168	1,953,525,168
Advanced Format (AF)	Yes	Yes	Yes	No	Yes	No	No
SATA latching connector	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance							
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s
Cache (MB)	64	64	64	32	64	32	32
Rotational speed (RPM)	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower
Reliability/Data Integrity							
Load/unload cycles[3]	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[4]	3	3	3	3	3	3	3
Power Management							
12VDC (A, peak)	1.75	1.75	1.55	1.75	1.55	1.75	1.464
Average power requirements (W) Read/write Idle Standby Sleep	 6.3 5.5 1.0 0.8	 6 5.5 0.8 0.8	 4.5 2.5 0.7 0.7	 6 3.7 0.8 0.8	 4.5 2.5 0.7 0.7	 6 3.7 0.8 0.8	 4.9 2.8 0.4 0.4
Environmental Specifications[5]							
Temperature (°C) Operating Non-operating	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read) Operating (2 ms, read/write) Non-operating (1 ms)	 30 65 250	 30 65 250	 30 65 250	 30 65 250	 30 65 250	 30 65 250	 30 65 300
Average acoustics (dBA)[6] Idle mode Performance seek mode Quiet seek mode	 24 25 25	 24 29 25	 24 29 25	 24 29 25	 24 29 25	 24 29 25	 23 27 24
Physical Dimensions							
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4		1.028/25.4		1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147		5.787/147		5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6		4/101.6		4/101.6
Weight (lb./kg, ± 10%)	1.61/0.73	1.61/0.73	1.61/0.73		1.61/0.73		1.32/0.60

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

[3] Controlled unload at ambient condition

[4] The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.

[5] No non-recoverable errors during operating tests or after non-operating tests.

[6] Sound power level.

WD Caviar Green

Specifications[1]	1 TB	800 GB	750 GB	750 GB	640 GB	640 GB	500 GB	320 GB
Model number	WD10EARS	WD8000AARS	WD7500AARS	WD7500AADS	WD6400AARS	WD6400AADS	WD5000AADS	WD3200AACS
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity	1,000,204 MB	800,204 MB	750,156 MB	750,156 MB	640,135 MB	640,135 MB	500,107 MB	320,072 MB
User sectors per drive	1,953,525,168	1,562,824,368	1,465,149,168	1,465,149,168	1,250,263,728	1,250,263,728	976,773,168	625,142,448
Advanced Format (AF)	Yes	Yes	Yes	No	Yes	No	No	No
SATA latching connector	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance								
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	 3 Gb/s 111 MB/s	 3 Gb/s 111 MB/s	 3 Gb/s 111 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 111 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s	 3 Gb/s 110 MB/s
Cache (MB)	64	64	64	32	64	32	32	16
Rotational speed (RPM)	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower
Reliability/Data Integrity								
Load/unload cycles[3]	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[4]	3	3	3	3	3	3	3	3
Power Management								
12VDC (A, peak)	1.75	1.75	1.75	1.464	1.75	1.464	1.206	1.206
Average power requirements (W) Read/write Idle Standby Sleep	 4.9 2.8 0.4 0.4	 4.9 2.8 0.4 0.4	 4.9 2.8 0.4 0.4	 4.9 2.8 0.4 0.4	 4.9 2.8 0.4 0.4	 4.9 2.8 0.4 0.4	 4.1 2.2 0.8 0.8	 4.1 2.2 0.8 0.8
Environmental Specifications[5]								
Temperature (°C) Operating Non-operating	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70	 0 to 60 -40 to 70
Shock (Gs) Operating (2 ms, read) Operating (2 ms, read/write) Non-operating (1 ms)	 30 65 300	 30 65 300	 30 65 300	 30 65 300	 30 65 300	 30 65 300	 30 65 350	 30 65 350
Average acoustics (dBA)[6] Idle mode Performance seek mode Quiet seek mode	 23 27	 23 27	 23 27	 23 27 24	 23 27	 23 27 24	 21 22 22	 21 22 22
Physical Dimensions								
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.32/0.60	1.32/0.60	1.32/0.60	1.32/0.60	1.32/0.60	1.32/0.60	0.99/0.45	0.99/0.45

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

[3] Controlled unload at ambient condition

[4] The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.

[5] No non-recoverable errors during operating tests or after non-operating tests.

[6] Sound power level.

WD Caviar Green is part of WD's complete lineup of desktop hard drives.

WD Caviar® Blue™
Desktop Hard Drives
Performance and reliability for everyday computing.

WD Caviar® Green™
Desktop Hard Drives
Cool, quiet, eco-friendly.

WD Caviar® Black™
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Maximum performance for power computing.

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2879-701229-A17 Jan 2011